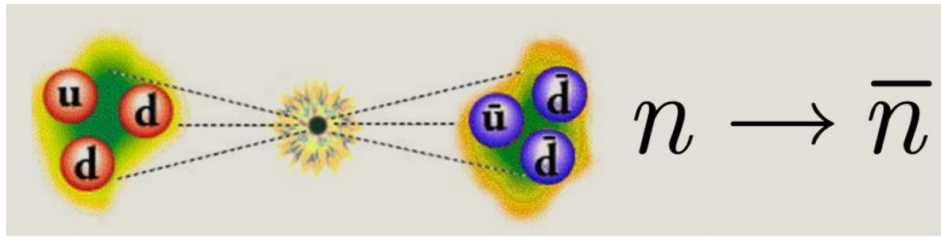


Theoretical Innovations for Future Experiments Regarding Baryon Number Violation, Part 1



Contribution ID: 34

Type: **Oral Presentation**

Search for NNbar with UCN

Wednesday, August 5, 2020 10:30 AM (30 minutes)

The scheme of the experiment on search for neutron-antineutron oscillations based on the storage of ultracold neutrons in a material trap is presented. The idea of such an experiment becomes important due to creation of new powerful UCN sources. The sensitivity of the experiment was obtained in Monte Carlo simulation of UCN transport and storage. It mostly depends on the trap size and the amount of UCN in it. Design of the setup, magnetic shielding study, neutron storage and annihilation detection simulations are presented. The possibilities of increasing the sensitivity of the experiment due to the accumulation of the antineutron phase in the collisions of neutrons with the walls are considered.

Contribution Title

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